JOINT MANAGEMENT PLAN REVIEW
DRAFT ACTION PLAN:
Coastal Development: Dredge Disposal

REVISED: March 18, 2003

***Please Note**: The MBNMS and the Sanctuary Advisory Council have tasked the management plan working groups with development of draft action plans that characterize the issue or problem and identify strategies and activities that address the issue. The working groups will develop these strategies and activities as they meet over the next several months. With this goal in mind, the progress of the group, the decisions and areas of agreement will be outlined in a progressively developed action plan identifying draft goals, issue characterizations, and strategies and activities. Members of the group as well as other interested parties should look to this draft action plan as it develops as a way of tracking the group's progress and decisions.*

Introduction

The periodic dredging of the local harbors is sometimes a necessary component of keeping the harbor channels clear and allowing access for all types of vessels. Although MBNMS regulations broadly prohibit disturbing the seabed, the specific act of dredging for harbors and their channels is specifically exempted by these regulations. Additionally, because dredging generally occurs with a port or harbor which is outside the MBNMS boundaries it is afforded further exception from the regulations. However, the MBNMS does have a regulatory role when considering proposals to dispose of dredged disposal sediments offshore within the National Marine Sanctuary.

This working group will review and discuss various issues related to dredge disposal that have arisen since designation of the MBNMS, including: disposal volumes, grain size, locations of existing sites, sedimentation sources, pier reconstruction at Moss Landing, sediment transport, beach nourishment, research gaps, dredge disposal and permit procedures. With input from agencies, harbormasters and other stakeholders, this review will focus on the continued protection of MBNMS resources, while also accommodating the disposal of harbor sediments when appropriate.

Harbors Adjacent to the MBNMS

There are four major harbors adjacent to the Monterey Bay National Marine Sanctuary (MBNMS). Two of these harbors regularly dredge the bottom of the harbor. Harbors dispose of their dredged material either in the ocean, on land at landfill sites, or at designated beach nourishment sites adjacent to the harbors. When the MBNMS was designated in 1992, two existing offshore sites for dredge disposal were identified, and the establishment of new sites was

prohibited within its boundaries. However, since that time, the MBNMS has recognized and authorized the use of two additional disposal sites at Santa Cruz and Monterey Harbors, because MBNMS staff determined these sites were in use and permitted by other agencies prior to designation.

How Does the MBNMS Currently Address Dredge Disposal?

The MBNMS is mandated to approach resource protection from a broad, ecosystem-based perspective. This requires consideration of a complex array of habitats, species, and interconnected processes and their relationship to human activities. This is best stated by language directly from the National Marine Sanctuary Act which states one of the overarching goals of the Sanctuary program. That goal is to "Maintain the natural biological communities in the national marine sanctuaries, and to protect, and where appropriate, restore and enhance natural habitats, populations and ecological processes". In accomplishing this goal the MBNMS intends to allow for the continued operation of harbor dredge disposal actions. We recognize that harbors are the gateways to accessing the MBNMS, and that physical processes, such as sediment movement, are important factors in controlling habitat, coastal erosion and littoral transport.

The MBNMS works with other state and federal agencies to ensure that MBNMS resources are protected. The MBNMS coordinates with the California Coastal Commission, the US Army Corps of Engineers, Environmental Protection Agency, the Regional Water Quality Control Board, California Department of Fish and Game, National Marine Fisheries Service, and the US Fish and Wildlife Service to review and authorize dredge disposal, as well as other discharges within the MBNMS. The MBNMS reviews the composition of the sediment, volumes, grain size, and associated contaminant load, to determine if the dredge sediments are appropriate for disposal in the ocean and comply with the provisions of relevant laws such as the Clean Water Act and the National Marine Sanctuaries Act. Most agencies have a specific mandate under which they view the potential disposal impacts, such as Essential Fish Habitat, or effects as they pertain to the Endangered Species Act. The MBNMS examines the issue from a larger holistic view of ecosystem protection.

The MBNMS regulations at Section 922.132 of 15 CFR describe prohibited or otherwise regulated activities. This section states that dredge disposal is prohibited within the MBNMS except for dredged material deposited at disposal sites authorized by the U.S. Environmental Protection Agency (EPA) (in consultation with the U.S. Army Corps. of Engineers (COE)) prior to the effective date of Sanctuary designation (January 1, 1993), provided that the activity is pursuant to, and complies with the terms and conditions of, a valid Federal permit or approval.

The MBNMS regulations exempted dredge disposal activities that complied with a federal permit or approval existing on January 1, 1993. However, current dredge disposal permits and the associated needs do not fall into this category as the permits for disposal have since expired. Therefore, additional disposal at such previously approved or permitted sites must be approved by NOAA in accordance with the authorization process (§944.11).

A MBNMS "authorization" must be obtained from local harbors when disposing of dredge sediments in the MBNMS (pursuant to MBNMS regulations at 15 CFR §§ 922.132(a)(2)(i), 922.132(f) and 922.49). The MBNMS works collectively with other agencies and "authorizes" other agency permits, generally the USACE or the CCC. This authorization comes in the form of either a "no objection" letter to the primary permitting agency (generally either the USACE or the CCC), a letter to another agency which recommends special conditions be added to that agency's primary permit, or in the form of an "authorization" issued directly to the harbor, which includes special conditions to ensure that these sediments are not adversely affecting the marine ecosystem and MBNMS resources.

These reviews minimize impacts to MBNMS resources while allowing the continued operation of our critical local harbors. MBNMS officials have allowed approximately 98% (by volume) of all dredge sediment proposed by local harbors for offshore disposal in the MBNMS since 1992.

The two harbors which regularly dredge, Santa Cruz Harbor and Moss Landing Harbor, dispose of the bulk of their dredge sediments within the MBNMS. In 1992, as stated in the MBNMS Final Environmental Impact Statement/ Management Plan, the dredging needs of Santa Cruz Harbor were on the order of removal of 100,000 to 130,000 cubic yards of sand per year. Moss Landing Harbor in 1992 was known to require dredging every two to three years with an associated volume of 50,000 cubic yards removed per cycle.

Currently the Santa Cruz Harbor has a MBNMS authorization to dispose of 360,000 cubic yards per year in the MBNMS. Moss Landing Harbor has a MBNMS authorization which allows for the disposal of 100,000 cubic yards of dredge sediments per year. The need for increased permitted volumes of material is thought to be due to natural events such as El Niño. Heavy rains associated with this phenomena often cause increased erosion in watersheds, and result in heavy sediment loading at the endpoint of rivers, in this case, the two harbors. Heavy winter storm conditions and high surf, also resultant from El Niño conditions are know to deposit increased volumes of sand at the mouth of entrance channels.

Goal Statement:
The goal of this Workgroup is to devise a framework for dredged material disposal, which ensures protection of the MBNMS ecosystem while allowing continued operation of local harbors.

Potential Management Strategies
The MBNMS will continue its role in authorizing permits for dredge disposal, while considering and improving the interagency review process.

STRATEGIES OF THE COASTAL DEVELOPMENT: DREDGE DISPOSAL ACTION PLAN

As a starting point for identifying potential strategies to address this issue, the Workgroup has begun developing some recommendations from a preliminary discussion list and will work at future meetings to define the following:

STRATEGY #1 CODIFY EXISTING SITES

This strategy recognizes the need to codify dredge disposal sites that have been recognized, after MBNMS designation, as being historical disposal sites.

Activity A: Codifying existing sites
Since designation, Santa Cruz and Monterey harbors have identified additional disposal sites which were in historic use prior to MBNMS designation. These sites have since been authorized for use via letters from the Sanctuary program. Workgroup recommendations include:

- Codification of two historical sites in the new management plan

Project status:
Potential partners:
Estimated costs:

STRATEGY #2: IMPROVE INTER-AGENCY COORDINATION

This strategy recognizes the need to improve interagency coordination for the purpose of streamlining the authorization process.

Activity A: Coordinated permit review
The interagency coordination and review process for dredge disposal is quite complicated. Increased efficiency and coordination is needed on the review of harbor permit applications. The MBNMS will continue to coordinate with the Coastal Commission, the USACE, and the EPA to review permits and authorizations. Workgroup recommendations include:

- Improving understanding of joint agency roles
- Aligning agency permits so that each permit or authorization is valid for the same time interval, where appropriate
- Strengthening of collaborative approach to solving issues between the harbors and agencies
- Develop a regional plan to address disposal needs
- Consider evaluation of other joint-permit programs and potential for central coast dredge disposal team
- Address the process for emergency permits
- Schedule permit planning meetings with agencies and harbors in advance of the application process to address needs.

Activity B: Increase permit review efficiency by issuing multi-year authorizations
The MBNMS has issued multi-year authorizations in the past. The MBNMS issues authorizations under the process outlined on page 3 of this document as stated under section 944.11. The authorization interval could potentially be increased to provide efficiency for both the harbor as well as the MBNMS. Workgroup recommendations include:

- Coordinating the timing and conditions of the multi-year permit process
- Agencies should continue to review specific disposal episodes
- Multi-year authorizations should include language which will re-evaluate the conditions of the authorizations and may include additional testing, or sampling and monitoring requirements if additional contaminants are thought to be present.
- In establishing appropriate time intervals, balance opportunities for efficiency with the need for periodic comprehensive review and public input

Project status:
Potential partners:
Estimated costs:

STRATEGY #3 SEDIMENT MONITORING AND REDUCTION PROGRAM

This strategy recognizes the need to: track and evaluate the need for increased disposal volumes, identify areas where improvements could be made to reduce increase sedimentation in harbors, evaluate contamination levels and sources, and conduct research to minimize information gaps.

Activity A: Analyze the need for changes in permit volumes
Significant increases in the permit volume of dredge disposal sediments have been occurring within the MBNMS over the past 10 years. The Santa Cruz harbor has increased their allowable permit volume by greater than 275% of the disposal quantity identified at the time of MBNMS designation. The Moss Landing Harbor has increased their allowable permit volume by 100% since MBNMS designation. In both instances, the MBNMS has authorized these increases. There are currently information gaps as to why this permitted increase is required. Workgroup recommendations include:

- Develop an interagency database for tracking actual volumes and volume changes
- Analyze trends in volume data and the causes of increased volume requests in permits. Link this information to potential effects
- Identify if there is a potential increased impact from increased volume
- Track/Monitor sediment loading from watersheds, coastal issues, etc

Activity B: Sediment reduction program
It may be possible to reduce the amount of dredge disposal entering the MBNMS by evaluating the watershed as a whole to determine where sediment reduction efforts could be implemented. Workgroup recommendations include:

- The MBNMS should promote keeping sediment in the watershed and restoring habitat which will reduce the need for dredging. The MBNMS should continue to encourage these efforts with the agricultural community as part of the MBNMS Agriculture and Rural Lands Plan which encourages farmers and ranchers to use conservation practices on their properties to reduce runoff in the form of sediments, nutrients and pesticides
- Explore tools to minimize dredging – sand bypassing, sand traps, and other reengineering options for dredging; and as a result, reduce the need for increased disposal
- Consider other solutions to address preventative erosion issues

Activity C: Evaluate and manage contamination and its source
This activity recognizes the need to evaluate contamination levels in dredged sediments. Contamination is usually related to fine grain sediment, whereas material high in sand content, which is larger in grain size, is relatively free of contamination. The physical characteristics of the sediment play a role in the strength of chemical adsorption and the active surface of the area of the particles. The Moss Landing Harbor 2002 results have yielded some of the most heavily

contaminated sediments in recent years. Historical contamination issues should be addressed to better understand the problem. Workgroup recommendations include:

- Examine all available data to make informed decisions
- Manage contamination-- Identify the upland sources of contaminated sediment. Consider solutions to address preventative erosion issues by linking to ongoing MBNMS water quality efforts
- Encourage funding for upland retention of contaminated sediments
- Understand boating within each harbor in order to discern whether different types of boaters contribute to contamination in various ways
- Increase communication between harbors and agencies to ensure that information going to the public and elected officials is accurate

Project status:
Potential partners:
Estimated costs:

Activity D: **Research and Monitoring:**
Information gaps could be reduced by conducting research to investigate the issue of dredge disposal. Analysis of dredging in the context of coastal erosion and sediment flow may improve the overall understanding of these processes. The final disposition of fine-grained materials and the subsequent impacts is often unknown. Workgroup recommendations include:

- Characterize and map contaminant levels in harbors and surrounding watersheds
- Determine the fate of disposed material
- Determine if the ultimate deposition is consistent with the intent of the disposal method
- Consider the natural sedimentation processes and, where possible, mimic them
- Pair ongoing survey work to include bathymetry mapping at harbor areas
- Evaluate the effects of tidal scour on Elkhorn Slough by incorporating potential dredge depth increases into current hydrology model for the Slough

Project status:
Potential partners:
Estimated costs:

STRATEGY #4 EVALUATION OF GRAIN SIZE ANALYSIS

This strategy will evaluate whether it is appropriate to change existing guidelines by lowering national standards for disposal of dredged material in intertidal and subtidal areas.

Activity A: Grain size analysis

When determining if material is suitable for intertidal and subtidal disposal on local beaches adjacent to the harbors, the EPA relies on guidance which indicates that the dredged material should be composed of at least 80% sand. This is an EPA national standard. Consideration of the appropriateness of variation from this guideline should be weighed. MBNMS staff are concerned with the appropriateness of lowering standards when disposing dredge material below mean high water inside a National Marine Sanctuary. Workgroup recommendations include:

- Determining if and when the EPA/CORPS guideline should be revised
- Ensuring that the material be similar in nature to the parent beach material

Project status:
Potential partners:
Estimated costs:

STRATEGY #5 RELOCATION / REDEFINITION OF SF 12 DREDGE DISPOSAL SITE

Activity A: SF 12:

There has been some confusion about the exact location of SF 12. Recently the USACE and the EPA have determined the correct location of the disposal site. There has been some interest to relocate the Moss Landing disposal site (SF12) in order to reduce environmental impacts to local beaches, minimize adverse impacts associated with dredge sediments to the nearshore region, the public, and the biological resources in the surf zone, by moving the disposal site to the head of the Monterey Bay Canyon. This would also aid in minimizing potential adverse impacts to the Moss Landing Marine Laboratories seawater intake system. Workgroup recommendations include:

- Clarify and disseminate information on exact existing boundaries of SF-12 to all interested parties
- Evaluate whether the current location of the dredge disposal pipe is no longer the best, considering environmental impacts, dredge disposal needs and pier reconstruction
- Evaluate legal aspects of potentially shifting location of SF-12, while preserving its function; evaluate whether this would be considered a relocated site or a new designation, and whether it would be allowed by Sanctuary program.
- Evaluate information on the environmental impacts of shifting the disposal location

Project status:
Potential partners:
Estimated costs:

STRATEGY #6 ALTERNATIVE DISPOSAL METHODS

This strategy recognizes the need to evaluate land-based disposal methods. Approximately 98% of harbor sediments appropriate for unconfined aquatic disposal have been authorized by the MBNMS. Occasionally, there may be other uses for dredged sediments that meet standards for the given beneficial use.

Activity A: **Evaluate potential beneficial usage**
The potential beneficial uses for dredge disposal and distribution patterns shall be examined. Workgroup recommendations include:

- Discuss the beneficial uses of dredge disposal
- Facilitation of alternative sites/uses for different levels of contamination
- Examine use of contaminated soil as daily cover for landfills
- Define what is meant by “clean” sediment
- Define beach nourishment
- Discuss and identifying when and where beach nourishment is appropriate

Project status:
Potential partners:
Estimated costs:

STRATEGY #7 PILLAR POINT HARBOR

The Pillar Point Harbor has not needed to conduct dredge operations since MBNMS designation. Currently the Pillar Point Harbor does not have a designated subtidal dredge disposal site directly adjacent to the Harbor. Workgroup recommendations include:

- Discuss and analyze the need for new dredge disposal location at Pillar Point
- Evaluate options for allowing disposal while avoiding setting a precedent on new sites for Sanctuary program as a whole
- Determine if redefinition is a way of dealing with this
- Examine if this could be defined as a beach nourishment site rather than a dredge disposal site.

Project status:
Potential partners:
Estimated costs:

Timeline for drafting MBNMS framework action plan: January 2003 – April 2003.